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(54) Title: REACTIVE OLIGOMERIC THIOL AND ENE MATERIALS AS DENTAL RESTORATIVE MIXTURES

(57) Abstract: The present invention provides a dental composition comprising a curable blend of one or more polythiol compounds and one or more polyvinyl compounds; where one or both compounds are oligomers. In one aspect, the polythiol compounds are polythiol oligomers formed by prepolymerization of polyvinyl monomers in the presence of an excess of polythiol monomers. In another aspect, the polyvinyl compounds are polyvinyl oligomers formed by prepolymerization of polythiol monomers in the presence of an excess of polyvinyl monomers. The dental composition may further comprise one or more fillers or photoinitiators known in the art. The invention also comprises methods of making a dental prosthesis comprising the composition described above. Use of the thiol-ene oligomeric system results in cured (polymerized) dental compositions having improved physical properties, including low-shrinkage properties and reduced shrinkage induced-stress, enhanced double bond conversion percentage, and reduced odor.



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